



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,843	10/22/2003	John P. McDermott	NC 83,820	7108

7590 07/08/2005

Naval Research Laboratory
Code 1008.2
4555 Overlook Ave., S.W.
Washington, DC 20375-5320

EXAMINER

NOBAHAR, ABDULHAKIM

ART UNIT	PAPER NUMBER
----------	--------------

2132

DATE MAILED: 07/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/693,843

Applicant(s)

MCDERMOTT, JOHN P.

Examiner

Abdulahkim Nobahar

Art Unit

2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Arguments

1. This communication is in response to applicant's response received on April 27, 2005.
2. The amendments of claims 1, 11 and 18 and addition of claims 19-31 are acknowledged.
3. Applicant's arguments have been fully considered but they are not persuasive.
4. With respect to the new limitation of the independent claims 1, 11, 18 and 23 applicant, for example, on page 12, lines 2-4 of remarks, argues that: "However, there is no disclosure in DeTreville that the curtained code determines whether the computer has been tampered with."

In response to the above, DeTreville discloses a scheme to test an instruction before execution either if it is of the type of allowed instruction such as curtained call or if it has the privilege level required to invoke the operation at the desired location (see [0117]-[0118] also see [0078]-[0086]). If either tests fails a fault signal is generated which is functionally equivalent to determine whether the computer has been tampered with.

5. With respect to the dependent claims 19 and 20 applicant, on page 14, lines 4-7 of remarks, argues that: "DeTreville does not disclose that the curtained code determine

Art Unit: 2132

whether at least one of malicious instructions, viruses, deceptive interpreters, and Trojan horses are present, or whether deceptive interpreters are present.”

As stated above, DeTreville discloses the generation of a fault signal when the testing of a current instruction fails (see [0117]-[0118]) and DeTreville also discloses an ATTEST operation to check whether if any of program components loaded into the operating system are tampered with or not (see [0078]-[0086]). In these both cases if a fault signal is generated or an un-trusted component is revealed that would indicate an attack on the computer system, or presence of a rouge application or execution of an un-authorized action, which are corresponding to the limitations of claims 19 and 20.

6. In light of the above submission the previous rejection of claims is maintained with consideration of the amendments of claims 1, 11 and 18 and the new claims.

Claim Objections

Claim 11 and 21 are objected to because of the following informalities:

Claim 11, in line 11, recites “, and executes one or more...” The “, and” is extra.

Claim 21, in line 3, recites “...and, and an incorrect...” The “, and” is extra.

Appropriate corrections are required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 22 recites the limitation "interrupts instructions..." in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-31 are rejected under 35 U.S.C. 102(e) as being anticipated by DeTreville (US 2004/0015694 A1).

Regarding claims 1, 22, 23 and 26-28, DeTreville discloses a method for authentication between an open system (i.e., a public accessible computer system) and a portable IC device (corresponding to a mobile device) (see [0010]). DeTreville discloses that a secure communication channel between the open system and the portable IC device that contains protected information is established and the application(s) desiring to access this information authenticates itself to the portable IC device (see [0011]). DeTreville discloses that the open computer system comprising a CPU, a secure memory containing a protected code called a curtailed code

Art Unit: 2132

(corresponding to the recited security check program), a memory storage, an operating system (corresponding to the recited a first program) for executing the instructions and other application programs (corresponding to the recited a second program) (see Figs. 2, 3 and 7; [0037]; [0038]; [0102]). DeTreville further discloses that the curtailed code is downloaded from the inner secured memory to a lesser security memory area for execution of an authenticating operation whenever is required by users (corresponding to the recited receives a secure attention instruction) in order to trust their private data to the applications running on the open computer system (see [0102]) and if an instruction to be executed is not of the right type or does not have the proper privilege level a fault signal is produced (corresponding to the recited identifying whether the computer has been tampered with) (see [0117]-[0118]). DeTreville also discloses that a boot methodology (corresponding to the recited interrupts the execution of all other instructions) is used to authenticate the software programs of the open system to the portable IC device (see [0037]).

Regarding claim 2, DeTreville discloses conventional bus architectures for receiving computer instructions (see [0038]; [0041]).

Regarding claim 3, DeTreville discloses a computer system for having a processor to execute computer instruction (see [0038]; Fig. 2).

Regarding claim 4, DeTreville discloses that a private key is securely stored in such a way (internally or externally) that only CPU has the privilege to access it, for example, in response to a challenge from the portable IC device (corresponding to the recited administrative secure attention instruction) for authentication purpose (see [0043]-[0045]).

Regarding claims 5, 6, 11, 15, 16 and 18, these claims are rejected as applied to the like elements of claim 1 as stated above and further the following:

DeTreville discloses cryptographic keys that is used for the authentication of the operating system and the applications running on the open system and the result of the authentication are transmitted to the portable IC device when a user request authentication of the OS or any application program (corresponding to the recited execution of the security check program) (see [0037]; [0042]; [0043]; [0059]; [0060]).

Regarding claims 7 and 9, DeTreville discloses the request (i.e., secure attention instruction) for authentication of the OS or an application program running on the open system is issued by the portable IC device (an external source) and the CPU of the open system receive the request from the OS of the open system (see Fig. 2; [0012]; [0037]).

Regarding claims 8 and 10, DeTreville discloses a portable IC device which is a secure computer device that have an authentication application (corresponding to the

recited mobile software agent) that interact with the operating system of the open computer system to perform authentication process (see [0039]).

Regarding claims 12 and 17, DeTreville discloses an authentication method that is called a curtain methodology (see [0037]). In this method a trusted application is authenticated in a secure manner regardless of the trustworthiness of the operating system (corresponding to the recited bypass of all other parts of the secure computer system).

Regarding claim 13, DeTreville discloses the request (i.e., secure attention instruction) for authentication of the OS or an application program running on the open system is issued by the portable IC device (an external source) and the CPU of the open system receive the request from the OS of the open system (see Fig. 2; [0012]; [0037]).

Regarding claim 14, DeTreville discloses a portable IC device which is a secure computer device that have an authentication application (corresponding to the recited mobile software agent) that interact with the operating system of the open computer system to perform authentication process (see [0039]).

Regarding claims 19-21, 24, 25 and 29-31, DeTreville discloses the generation of a fault signal when the testing of a current instruction fails (see [0117]-[0118]).

DeTreville also discloses an ATTEST operation to check whether if any of program

Art Unit: 2132

components loaded into the operating system are tampered with or not (see [0078]-[0086]). In these both cases if a fault signal is generated or an un-trusted component is revealed that would indicate an attack on the computer system, or presence of a rouge application or execution of an un-authorized action, which are corresponding to the limitations of claims 19 and 20.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abdulhakim Nobahar whose telephone number is 571-272-3808. The examiner can normally be reached on M-T 8-6.

Art Unit: 2132

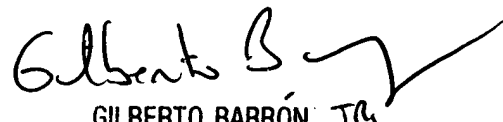
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abdulahkim Nobahar
Examiner
Art Unit 2132



July 6, 2005



GILBERTO BARRÓN JR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100